

CLAIMS

1. An attachment apparatus for a ladder having a plurality of rungs extending between a pair of elongated rails, comprising:

a main support adapted to be coupled to the ladder parallel to the rungs and having a first coupling member adapted to be proximate a first one of the elongated rails and a second coupling member adapted to be proximate another one of the elongated rails; and

first and second support modules, each support module having an elongated support member and a support arm projecting outwardly therefrom in a first direction, the support member having at least one projecting portion removeably coupled with at least one of the first and second coupling members of the main support.

2. The apparatus according to claim 1 wherein each elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the projecting portion comprises the proximal end.

3. The apparatus according to claim 2 wherein each elongated support member has a first longitudinal axis that is aligned with a second longitudinal axis of the main support.

4. The apparatus according to claim 1 wherein the elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the projecting portion comprises an engagement arm attached to the support member at a location spaced apart from the proximal end and projecting outwardly therefrom in a second direction.

5. The apparatus according to claim 4 wherein each elongated support member has a first longitudinal axis that is orthogonal to a second longitudinal axis of the main support.

6. The apparatus according to claim 1 wherein each elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the proximal end comprises a first projecting portion slideably engageable with the at least one coupling member such that a first longitudinal axis of the support member is aligned with a second longitudinal axis of the main support, further comprising an engagement arm attached to the support member at a location spaced apart from the proximal end and projecting outwardly therefrom in a second direction, the engagement arm comprising a second projecting portion slideably engageable with the at least one coupling member such that the first longitudinal axis of the support member is orthogonal to the second longitudinal axis of the main support.

7. The apparatus according to claim 1 wherein the main support is adapted to be coupled to a rung of the ladder.

8. The apparatus according to claim 1 wherein at least one of the first and second coupling members comprises a receptacle, and wherein the projecting portion is slideably engageable with the at least one of the first and second coupling members.

9. The apparatus according to claim 1 wherein at least one of the first and second coupling members comprises a non-circular receptacle and wherein at least one of the projecting portions is slideably engageable within the non-circular receptacle.

10. The apparatus according to claim 1, further comprising at least one securing mechanism including a locking pin securing each support module to the main support.

11. An attachment apparatus for a ladder having a plurality of rungs extending between a pair of elongated rails, comprising:

a main support adapted to be coupled to the ladder approximately parallel to the rungs and having a first coupling member proximate a first one of the elongated rails and a second coupling member proximate another one of the elongated rails; and

a first support module removeably coupled to the first coupling member and a second support module removeably coupled to the second coupling member, each support module having a support member including a proximal end and a distal end, and a support arm attached to the support member proximate the distal end and projecting outwardly therefrom in a first direction, the proximal end of the support member being removeably coupleable to a corresponding one of the first and second coupling members in a first position wherein the support member is approximately aligned with the main support.

12. The apparatus according to claim 11 wherein each support module further includes an engagement arm attached to the support member at a location spaced apart from the proximal end and projecting outwardly therefrom in a second direction, and wherein the engagement arm is removeably coupleable to the corresponding one of the first and second coupling members in a second position wherein the support member is approximately orthogonal to the main support

13. The apparatus according to claim 12 wherein in the second position, the support member is approximately orthogonal to the main support and the support arm projects outwardly toward a first side of the main support, and wherein the engagement arm is further removeably coupleable to the corresponding one of the first and second coupling members in a third position wherein the support member is approximately orthogonal to the main support and the support arm projects outwardly toward a second side of the main support.

14. The apparatus according to claim 11 wherein at least one of the first and second coupling members comprises a receptacle and wherein the proximal end of the support member is slideably engageable within the receptacle.

15. An attachment apparatus for a ladder having a plurality of rungs extending between a pair of elongated rails, comprising:

a main support adapted to be coupled to the ladder approximately parallel to the rungs and having a first coupling member proximate a first one of the elongated rails and a second coupling member proximate another one of the elongated rails; and

a first support module removeably coupled to the first coupling member and a second support module removeably coupled to the second coupling member, each support module having a support member including a proximal end and a distal end, a support arm attached to the support member proximate the distal end and projecting outwardly therefrom in a first direction, an engagement arm attached to the support member at a location spaced apart from the proximal end and projecting outwardly therefrom in a second direction, and wherein the engagement arm is removeably coupleable to a corresponding one of the first and second coupling members in a first position wherein the support member is approximately orthogonal to the main support.

16. The apparatus according to claim 15 wherein the proximal end of the support member is removeably coupleable to the corresponding one of the first and second coupling members in a second position wherein the support member is approximately aligned with the main support.

17. The apparatus according to claim 15 wherein in the first position, the support member is approximately orthogonal to the main support and the support arm projects outwardly toward a first side of the main support, and wherein the engagement arm is further removeably coupleable to the corresponding one of the first and second coupling members in a third position wherein the support member is approximately orthogonal to the

main support and the support arm projects outwardly toward a second side of the main support.

18. The apparatus according to claim 15 wherein at least one of the first and second coupling members comprises a receptacle and wherein the proximal end of the support member is slideably engageable within the receptacle.

19. An assembly, comprising:
a ladder having a plurality of rungs extending between a pair of elongated rails;

an attachment assembly coupled to the ladder, comprising

a main support coupled to the ladder parallel to the rungs and having a first coupling member proximate a first one of the elongated rails and a second coupling member proximate another one of the elongated rails; and

first and second support modules, each support module having an elongated support member and a support arm projecting outwardly therefrom in a first direction, the support member having at least one projecting portion removeably coupled with at least one of the first and second coupling members of the main support.

20. The assembly according to claim 19 wherein each elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the projecting portion comprises the proximal end.

21. The assembly according to claim 20 wherein each elongated support member has a first longitudinal axis that is aligned with a second longitudinal axis of the main support.

22. The assembly according to claim 19 wherein the elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the projecting portion comprises an engagement arm attached to the support member at a location spaced apart from the proximal end and projecting outwardly therefrom in a second direction.

23. The assembly according to claim 22 wherein each elongated support member has a first longitudinal axis that is orthogonal to a second longitudinal axis of the main support.

24. The assembly according to claim 19 wherein each elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the proximal end comprises a first projecting portion slideably engageable with the at least one coupling member such that a first longitudinal axis of the support member is aligned with a second longitudinal axis of the main support, further comprising an engagement arm attached to the support member at a location spaced apart from the proximal end and projecting outwardly therefrom in a second direction, the engagement arm comprising a second projecting portion slideably engageable with the at least one coupling member such that the first longitudinal axis of the support member is orthogonal to the second longitudinal axis of the main support.

25. The assembly according to claim 19 wherein at least one of the first and second coupling members comprises a receptacle, and wherein the projecting portion is slideably engageable with the at least one of the first and second coupling members.

26. A method of stabilizing a ladder having a plurality of rungs extending between a pair of elongated rails, comprising:

coupling a main support to the ladder parallel to the rungs, the main support having a first coupling member proximate a first one of the elongated rails and a second coupling member proximate another one of the elongated rails; and

removeably coupling first and second support modules to the first and second coupling members, respectively, each support module having an elongated support member and a support arm projecting outwardly therefrom in a first direction, the support member having at least one projecting portion removeably coupled with at least one of the first and second coupling members of the main support.

27. The method according to claim 26 wherein each elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein removeably coupling first and second support modules to the first and second coupling members comprises slideably engaging the proximal ends of the support members with the coupling members.

28. The method according to claim 26 wherein the elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the projecting portion comprises an engagement arm attached to the support member at a location spaced apart from the proximal end and projecting outwardly therefrom in a second direction, and wherein removeably coupling the first and second support modules to the first and second coupling members comprises slideably engaging the engagement arms of the support members with the coupling members.

29. The method according to claim 26 wherein each elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the proximal end comprises a first projecting portion, further comprising an engagement arm attached to the support member at a location spaced apart from the proximal end and projecting outwardly therefrom in a second direction, and wherein removeably coupling the first and second support modules to the first and second coupling members comprises at least one of slideably engaging the proximal ends of the support members with the coupling members and slideably engaging the engagement arms of the support members with the coupling members.

30. An attachment apparatus for a ladder having a plurality of rungs extending between a pair of elongated rails, comprising:

a main support adapted to be coupled to the ladder parallel to the rungs and having a first pivotal coupler adapted to be proximate a first one of the elongated rails and a second pivotal coupler adapted to be proximate another one of the elongated rails; and

first and second support modules, each support module having an elongated support member and a support arm projecting outwardly therefrom in a first direction, each support member being hingeably coupled with a respective one of the first and second pivotal couplers of the main support.

31. The apparatus according to claim 30 wherein each elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the proximal end is coupled to the pivotal coupler.

32. The apparatus according to claim 31 wherein each elongated support is selectably positionable with respect to the main support.

33. The apparatus according to claim 32 wherein the support member is selectably positioned with respect to the main support so that a first longitudinal axis of the support member is approximately perpendicular to a second longitudinal axis of the main support.

34. The apparatus according to claim 32 wherein the support member is selectably positioned with respect to the main support so that a first longitudinal axis of the support member is approximately parallel to a second longitudinal axis of the main support.

35. The apparatus according to claim 31 wherein each elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the proximal end is coupled with at

least one of the first and second pivotal couplers of the main support such that a first longitudinal axis of the support member is perpendicular to a second longitudinal axis of the main support when the support member is positioned in a first selected operating position, and wherein the first longitudinal axis of the support member is parallel to the second longitudinal axis of the main support when the support member is positioned in a second selected operating position.

36. The apparatus according to claim 31 wherein the main support is adapted to be coupled to a rung of the ladder.

37. The apparatus according to claim 35 wherein at least one of the first and second pivotal couplers comprises a coupler body hingeably coupled to the support member, and wherein the coupler body further comprises at least one alignment hole that projects through the coupler body that is configured to receive a locking device.

38. The apparatus according to claim 1 wherein at least one of the first and second coupling members comprises a non-circular receptacle and wherein at least one of the projecting portions is slideably engageable within the non-circular receptacle.

39. The apparatus according to claim 1, further comprising at least one securing mechanism including a locking pin securing each support module to the main support.

40. An attachment apparatus for a ladder having a plurality of rungs extending between a pair of elongated rails, at least one of the rungs having an interior recess extending along a length of the rung, comprising:

a pair of adaptors each having a forward engagement member configured to be received within the interior recess of the rung and having an opposing engagement recess extending outwardly from the rails when the adaptors are received within the interior recess;
and

first and second support modules, each support module having an elongated support member and a support arm projecting outwardly therefrom in a first direction, each support member having at least one projecting portion configured to be removeably coupled with the engagement recess of the adaptor.

41. The apparatus according to claim 40 wherein each elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the projecting portion comprises the proximal end.

42. The apparatus according to claim 41 wherein each elongated support member has a first longitudinal axis that is aligned with a second longitudinal axis of the main support.

43. The apparatus according to claim 40 wherein the elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the projecting portion comprises an engagement arm attached to the support member at a location spaced apart from the proximal end and projecting outwardly therefrom in a second direction.

44. The apparatus according to claim 43 wherein each elongated support member has a first longitudinal axis that is orthogonal to a longitudinal axis extending along the rung.

45. The apparatus according to claim 40 wherein each elongated support member includes a proximal end and a distal end, the support arm being attached to the support member proximate the distal end, and wherein the proximal end comprises a first projecting portion slideably engageable with the engagement recess such that a first longitudinal axis of the support member is aligned with a longitudinal axis that extends along the rung, further comprising an engagement arm attached to the support member at a location

spaced apart from the proximal end and projecting outwardly therefrom in a second direction, the engagement arm comprising a second projecting portion slideably engageable with the engagement recess such that the first longitudinal axis of the support member is orthogonal to the longitudinal axis of the rung.

46. The apparatus according to claim 40, further comprising at least one securing mechanism including a locking pin securing each support module to the adaptors.